LISTING OF THE CLAIMS

Please amend the claims as shown below. A complete listing of the claims, including their current status, is set forth below.

Claims 1-76 (Cancelled).

77. (Previously Presented) An isolated polynucleotide encoding a G protein-coupled receptor, wherein said polynucleotide is selected from the group consisting of:

(a) a polynucleotide comprising a nucleotide sequence encoding the polypeptide of SEQ D N0:20; and

(b) a polynucleotide comprising the nucleotide sequence of SEQ ID NO: 19.

78. (Previously Presented) An isolated polynucleotide encoding a G protein-coupled receptor, wherein said polynucleotide is selected from the group consisting of:

(a) a polynucleotide consisting of a nucleotide sequence encoding the polypeptide of SEQ ID N0:20; and

(b) a polynucleotide consisting of the nucleotide sequence of SEQ ID NO: 19.

79. (Previously Presented) A vector comprising the polynucleotide of claim 77 or claim 78.

80. (Previously Presented) The vector of claim 79, wherein said vector is an expression vector, and said polynucleotide is operably linked to a promoter.

81. (Previously Presented) A recombinant host cell comprising the vector of claim 79.

82. (Previously Presented) A process for making a recombinant host cell comprising the steps of:

(a) transfecting the expression vector of claim 80 into a suitable host ceil; and

(b) culturing the host cell under conditions which allow expression of a G protein-coupled receptor from the expression vector.

83. (Previously Presented) A membrane of the recombinant host cell of claim 81 comprising said G protein-coupled receptor.

84. (Previously Presented) An isolated polynucleotide encoding a non-endogenous, constitutively activated G protein-coupled receptor, wherein said polynucleotide is selected from the group consisting of:

(a) a polynucleotide comprising a nucleotide sequence encoding the polypeptide of SEQ ID N0:20 wherein the codon corresponding to glycine at amino acid position 285 has been substituted with a codon corresponding to an amino acid other than glycine; and

(b) a polynucleotide comprising the nucleotide sequence of SEQ ED NO: 19 wherein the codon at nucleotide positions 853-855 corresponding to glycine has been substituted with a codon corresponding to an amino acid other than glycine.

85. (Previously Presented) An isolated polynucleotide encoding a non-endogenous, constitutively activated G protein-coupled receptor, wherein said polynucleotide is selected from the group consisting of:

(a) a polynucleotide consisting of a nucleotide sequence encoding the polypeptide of SEQ ID N0:20 wherein the codon corresponding to glycine at amino acid position 285 has been substituted with a codon corresponding to an amino acid other than glycine; and

(b) a polynucleotide consisting of the nucleotide sequence of SEQ ID NO: 19 wherein the codon at nucleotide positions 853-855 corresponding to glycine has been substituted with a codon corresponding to an amino acid other than glycine.

86. (Previously Presented) The polynucleotide of claim 84 or claim 85 wherein the codon corresponding to glycine at amino acid position 285 or the codon at nucleotide positions 853-855 corresponding to glycine has been substituted with a codon corresponding to lysine.

87. (Previously Presented) A vector comprising the polynucleotide of claim 84.

88. (Previously Presented) The vector of claim 87, wherein said vector is an expression vector, and said polynucleotide is operably linked to a promoter.

89. (Previously Presented) A recombinant host cell comprising the vector of claim 87.

90. (Previously Presented) A process for making a recombinant host cell comprising the steps of:

(a) transfecting the expression vector of claim 88 into a suitable host cell; and

(b) culturing the host cell under conditions which allow expression of a G protein-coupled receptor from the expression vector.

91. (Previously Presented) A membrane of the recombinant host cell of claim 89 comprising said expressed G protein-coupled receptor.

92. (Previously Presented) An isolated polynucleotide encoding a G protein fusion construct of a G protein-coupled receptor, wherein said polynucleotide comprises the nucleotide sequence of SEQ ID NO: 19.

93. (Previously Presented) An isolated polynucleotide encoding a G protein fusion construct of a G protein-coupled receptor, wherein said polynucleotide comprises a nucleotide sequence selected from the group consisting of:

(a) a nucleotide sequence encoding the polypeptide of SEQ ID N0:20 wherein the codon corresponding to glycine at amino acid position 285 has been substituted with a codon corresponding to an amino acid other than glycine; and

(b) the nucleotide sequence of SEQ ID NO: 19 wherein the codon at nucleotide positions 853-855 corresponding to glycine has been substituted with a codon corresponding to an amino acid other than glycine.

94. (Previously Presented) The isolated polynucleotide of claim 93 wherein the codon corresponding to glycine at amino acid position 285 or the codon at nucleotide positions 853-855 corresponding to glycine has been substituted with a codon corresponding to lysine.

95. (Previously Presented) A vector comprising the polynucleotide of any one of claims 92, 93 or 94.

96. (Previously Presented) The vector of claim 95, wherein said vector is an expression vector, and said polynucleotide is operably linked to a promoter.

97. (Previously Presented) A recombinant host cell comprising the vector of claim 95.

98. (Previously Presented) A process for making a recombinant host cell comprising the steps of:

(a) transfecting the expression vector of claim 96 into a suitable host cell; and

(b) culturing the host cell under conditions which allow expression of a G protein fusion construct of a G protein-coupled receptor from the expression vector.

99. (Previously Presented) A membrane of the recombinant host cell of claim 97 comprising said G protein fusion construct.

100. (Previously Presented) A vector comprising the polynucleotide of claim 85.

101. (Previously Presented) A vector comprising the polynucleotide of claim 86.

102-106. (Cancelled)

107. (New) An isolated polynucleotide comprising the nucleotide sequence of SEQ ID NO: 19.

108. (New) The isolated polynucleotide of claim 107, wherein said isolated polynucleotide is capable of discriminating between a human tissue selected from the right cerebellum, left cerebellum, or substantia nigra and an other human tissue.